ArcPad^{TM} (mobile mapping software) Survey Examples

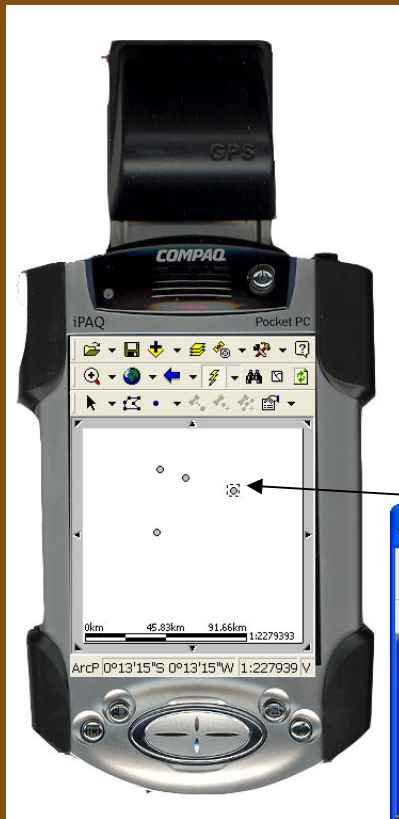## Dr. Ronald D. Weeks Jr.
CPHST-ANPCL-SIPS

United States Department of Agriculture
Animal and Plant Health Inspection Service
Plant Protection and Quarantine
Center for Plant Health Science and Technology
Analytical and Natural Products Chemistry Laboratory
Soil Inhabiting Pests Section
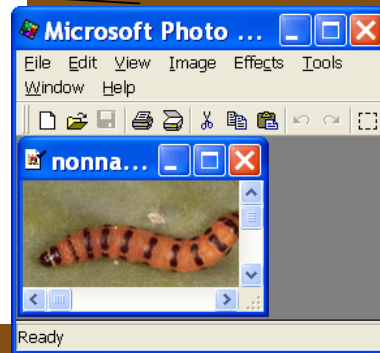
Current survey efforts using ArcPad™

➢ Phorid fly releases and surveillance – state cooperators

➢ Cactus Moth CAPS surveys – pest survey specialists

➢ Cactus Moth volunteer surveys – state park personnel, master gardeners, etc

➢ Cactus Moth SIT – ARS and PPQ

➢ Med fly in Costa Rica – APHIS, International Services

➢ Several ad-hoc surveys in development (e.g.Phytophthora **ramorum**)
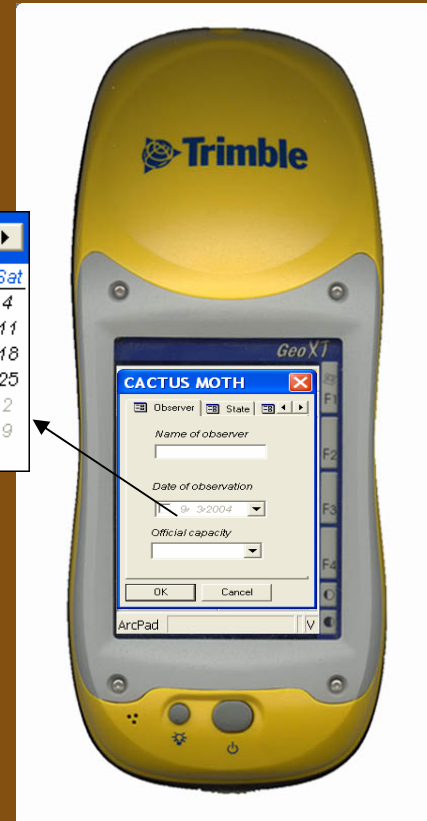
Software flexibility and functionality

Hyperlinks to web pages and images

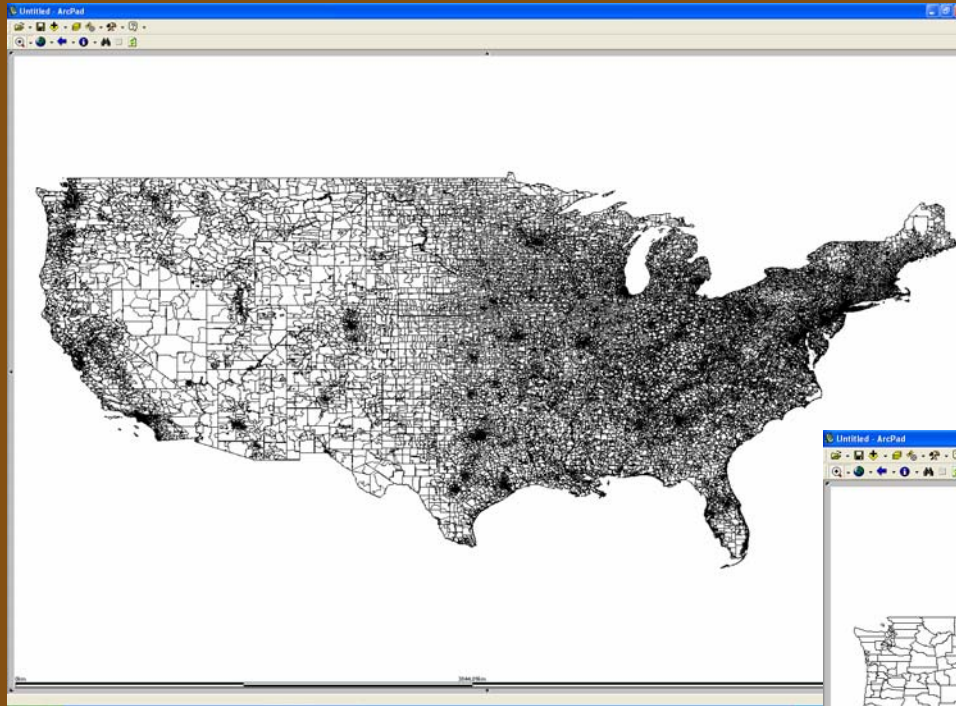**Custom pull down menus reduce errors**
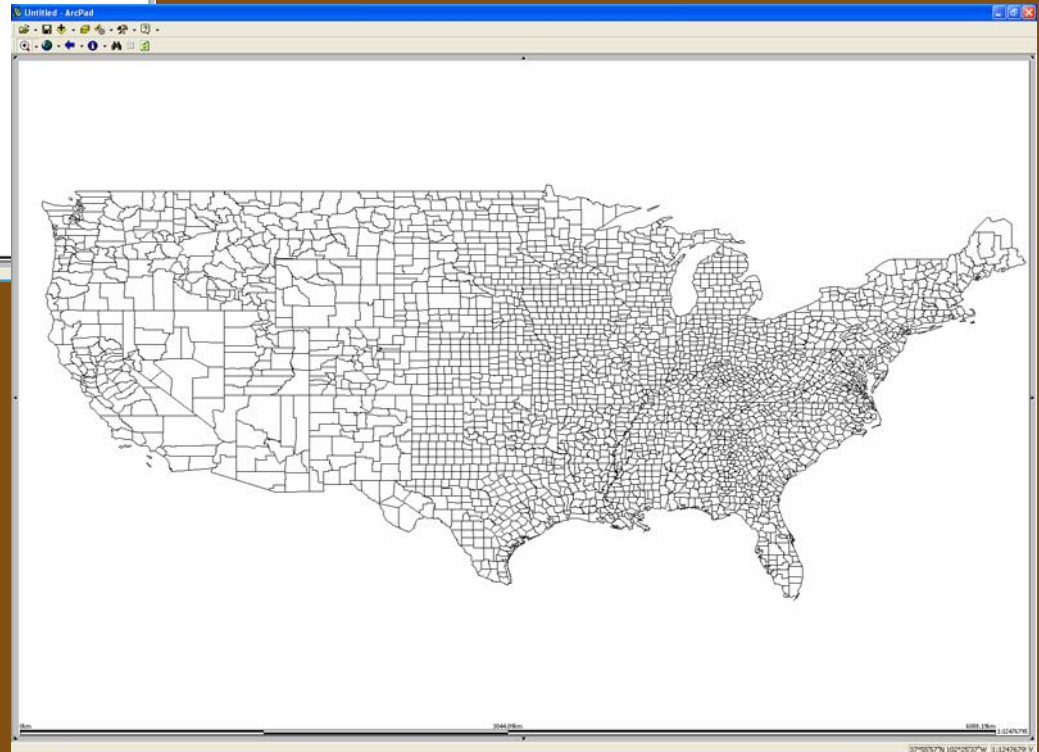
Navigate to map features

Download data in the field or in the office for validation or editing
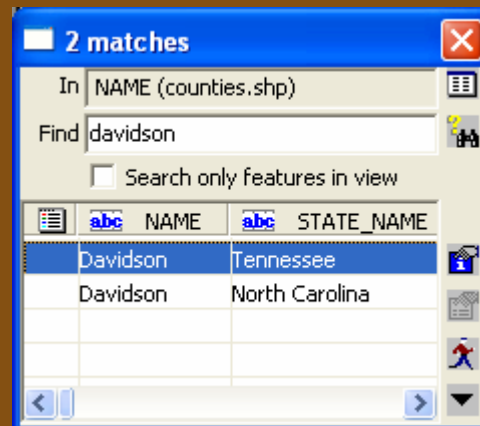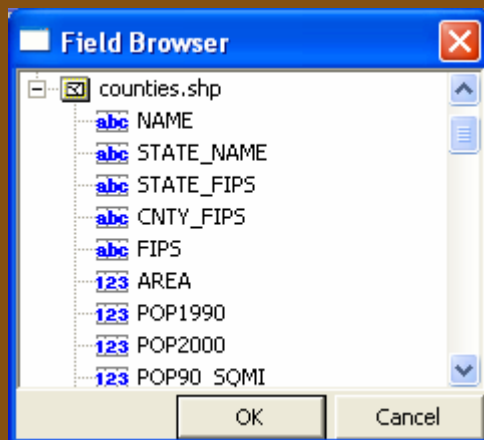
Mapping and Location identifiers
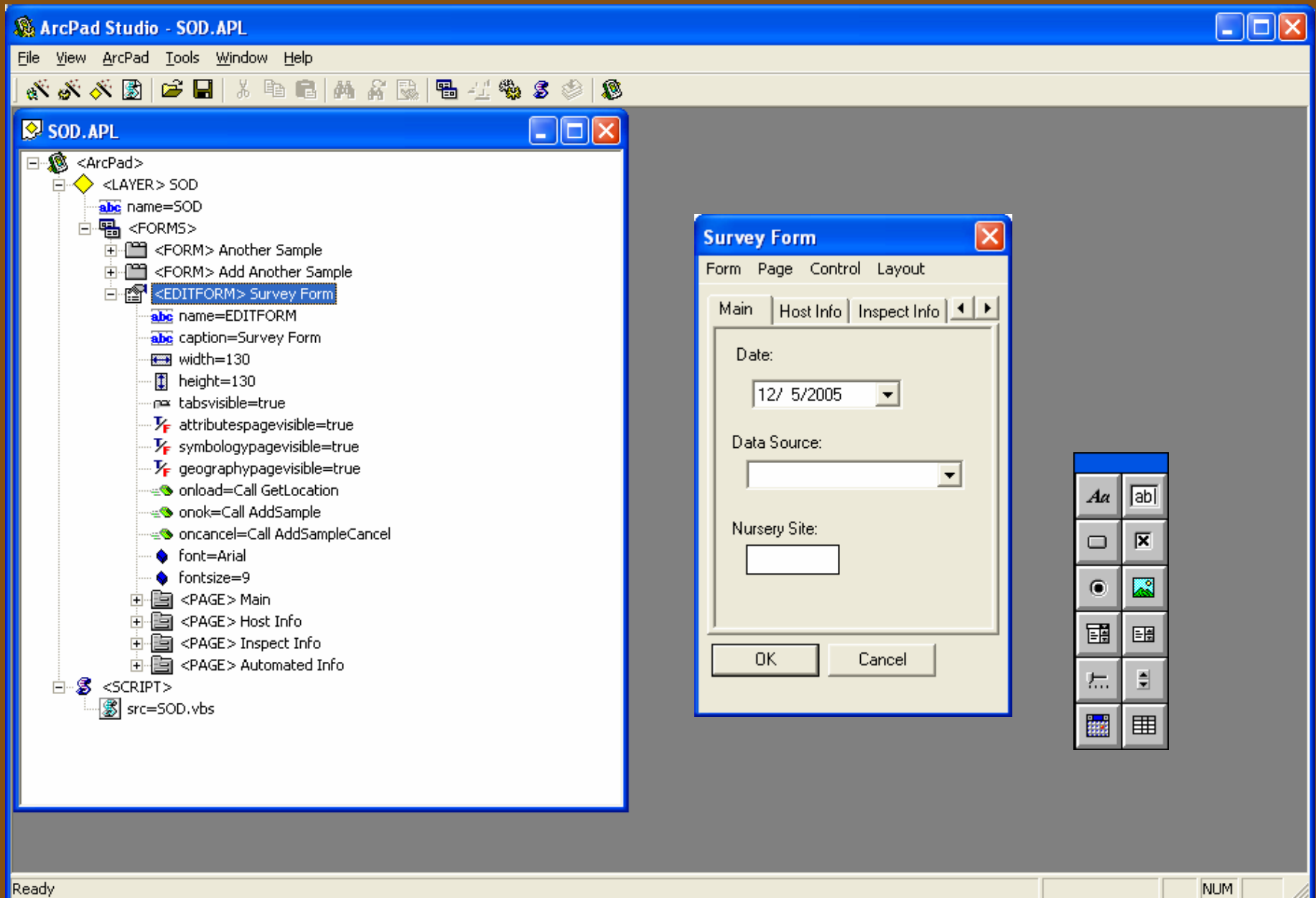

All U.S. counties (names and FIPS)

All U.S. counties and Zip Codes

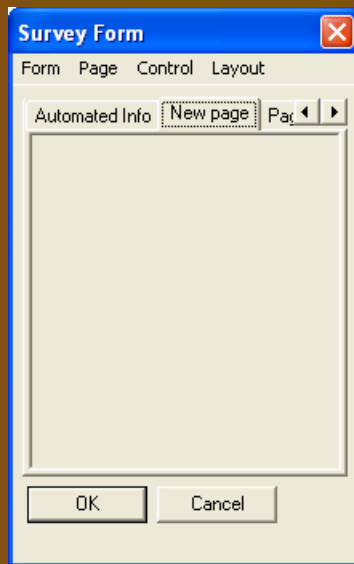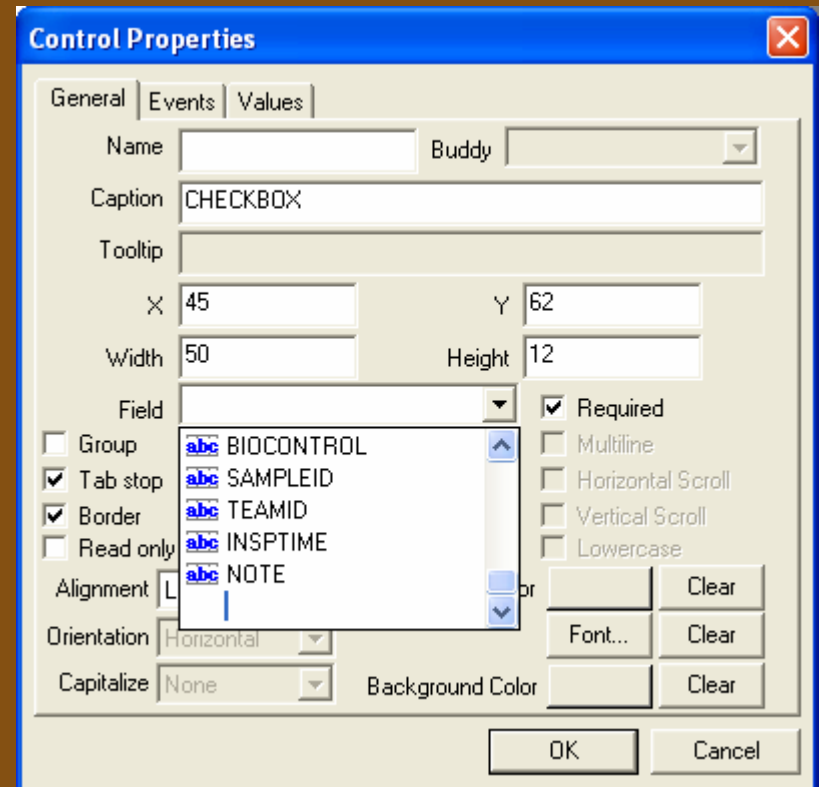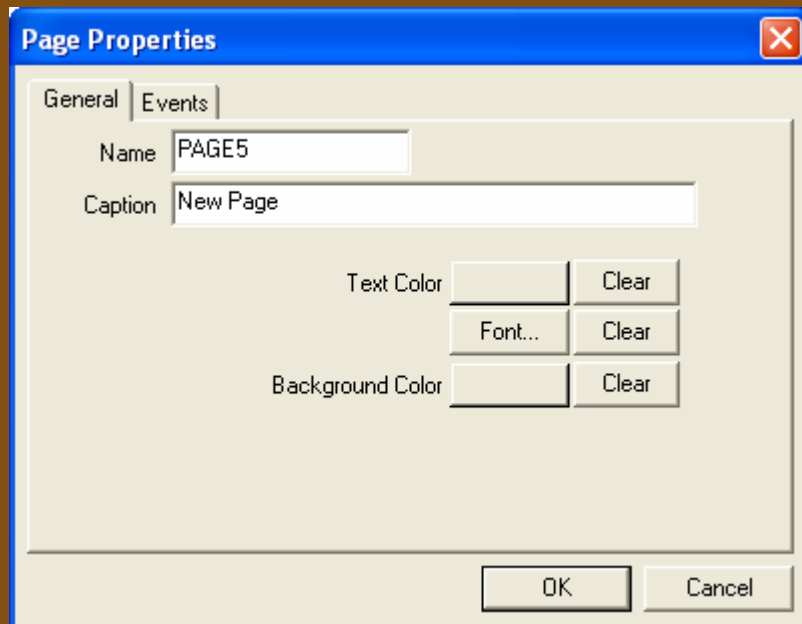# *Search features*

ArcPad Application Builder

Form and Page Controls
- Create new forms
- Add and organize Pages to Forms

Control Properties
- Add buttons, drop-down menus
- Link to data fields
- Add restrictions

Some Survey Menus

Survey Form

Automated Info | Attrib

- Obs No: SODMS0101
- FIPS: 28059
- Latitude: 30.61
- Longitude: -88.81
- Zipcode: 39565
- Pest: FGHEPWN
- Survey Method: 00557
- Descriptor: 318

OK | Cancel

Another Sample

Main

Do you have another sample at this location

- ◉ Yes and Same Species
- ○ Yes but Different Species
- ○ No

OK | Cancel

Add Another Sample

Host Info | Inspection

Host Species:

Host Stage (Optional):

Host (Crop) Nursery Category:

OK | Cancel

Cactoblastis

Survey Info | Pest Hist

- Survey Method: Pherocon 1C Trap
- Survey location: AG FIELD
- Host: Opuntia spp.
  - Opuntia spp.
  - O. basilaris
  - O. engelmanii
  - O. ficus-indica
  - O. lindheimeri
  - O. microdasys
  - O. robusta
  - O. rufida
  - O. santa-rita
- Pest

OK

Data is formatted for easy retrieval and integration
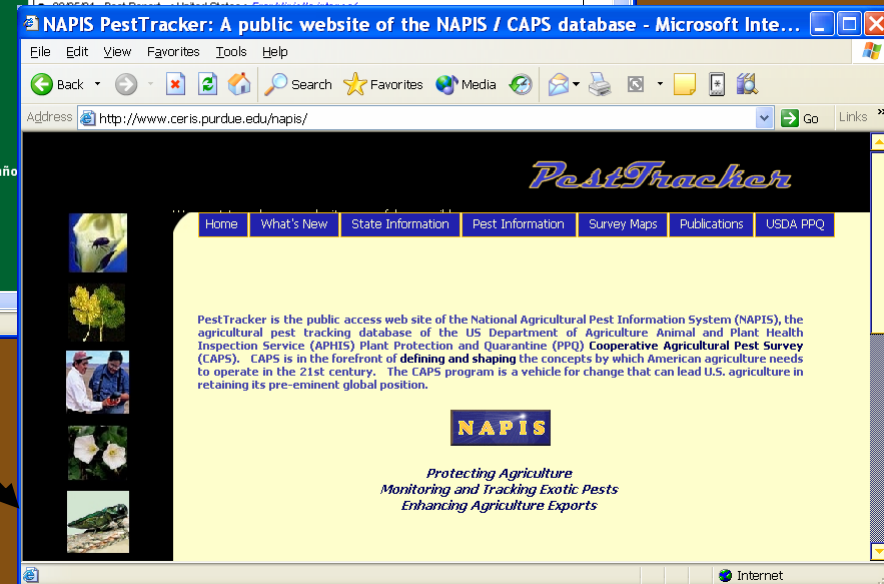
NAPIS: 23 fields - 8 required
- 22 comma-delimited fields

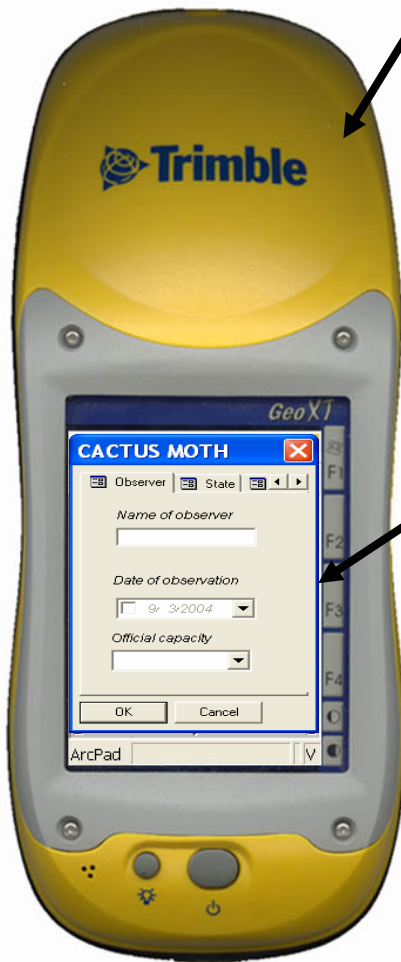# An example data sheet

Data Conversion Utility
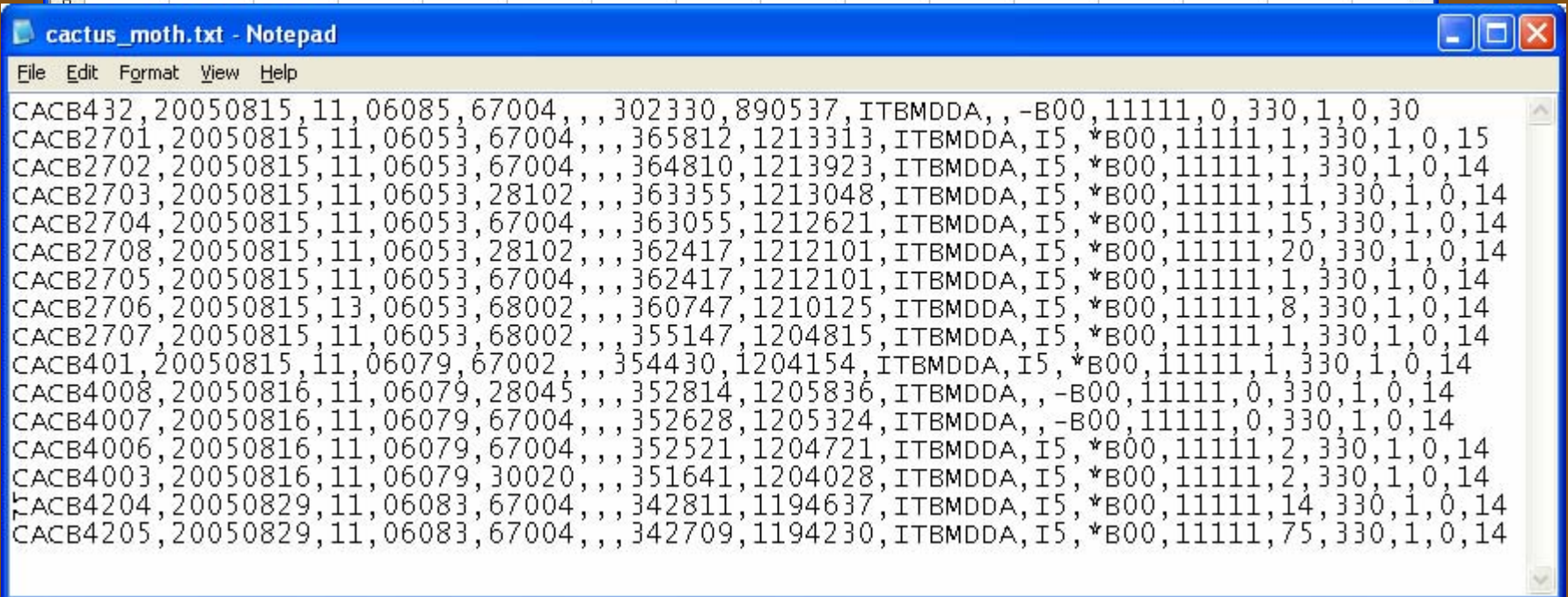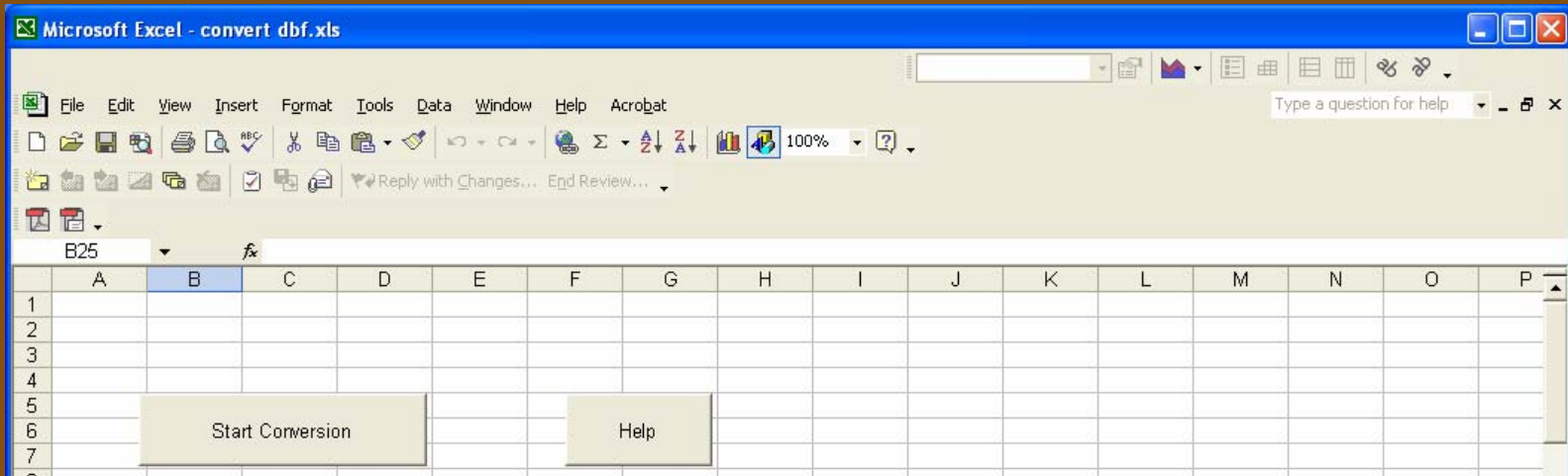
Some hardware options (goal dependent)

Trimble GeoXT
- **sub-meter accuracy**
- **very expensive**

Teletype World Navigator® GPS
- **ca. 1 - 5 m accuracy**
- **way-less expensive**

•**ESRI GIS Software®**
 (USDA - APHIS license)
•**ArcPad 7**
•**ArcPad Application Builder**

IPAQ ® Pocket PC H3955
IPAQ ® Expansion Pack Plus
256MB SecureDigital ® Card
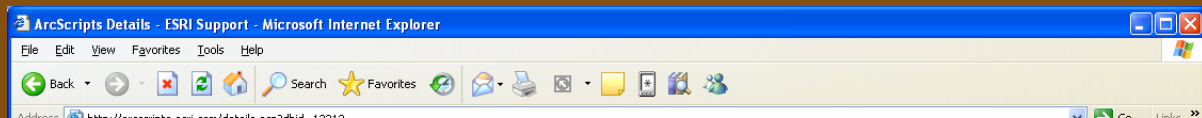**USB Sync Cable – IPAQ®**

New capabilities in ArcPad 7 and ArcPad Application Builder

- ➢ Higher-quality mapping capabilities
- ➢ Integrates GPS, digital cameras, and range finders in data collection
- ➢ More robust editing capabilities; snapping, undo, offsets,
- ➢ Add field sketches and notes using Graphics layer.
- ➢ Application Builder has improved script editor
- ➢ Improved customization Quick Tool Wizard

On-line developer and user support

PDA/GPS USER'S GUIDE

Phorid fly tracking project

http://www.cphst.org/projects/Phorid_monitoring/

http://cmave.usda.ufl.edu/ifahi/phorid_pics_gallery.html

PDA/GPS Contact
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Phorid fly Release Contact
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Fax: (228) 822 - 3102
Email: anne-marie.a.callcott@aphis.usda.gov

Some Phorid Spread Data in AL & MS

Phorid fly Data Flow Chart

PDA   **CPHST (SIPS) Workstation**   **Decision Support**
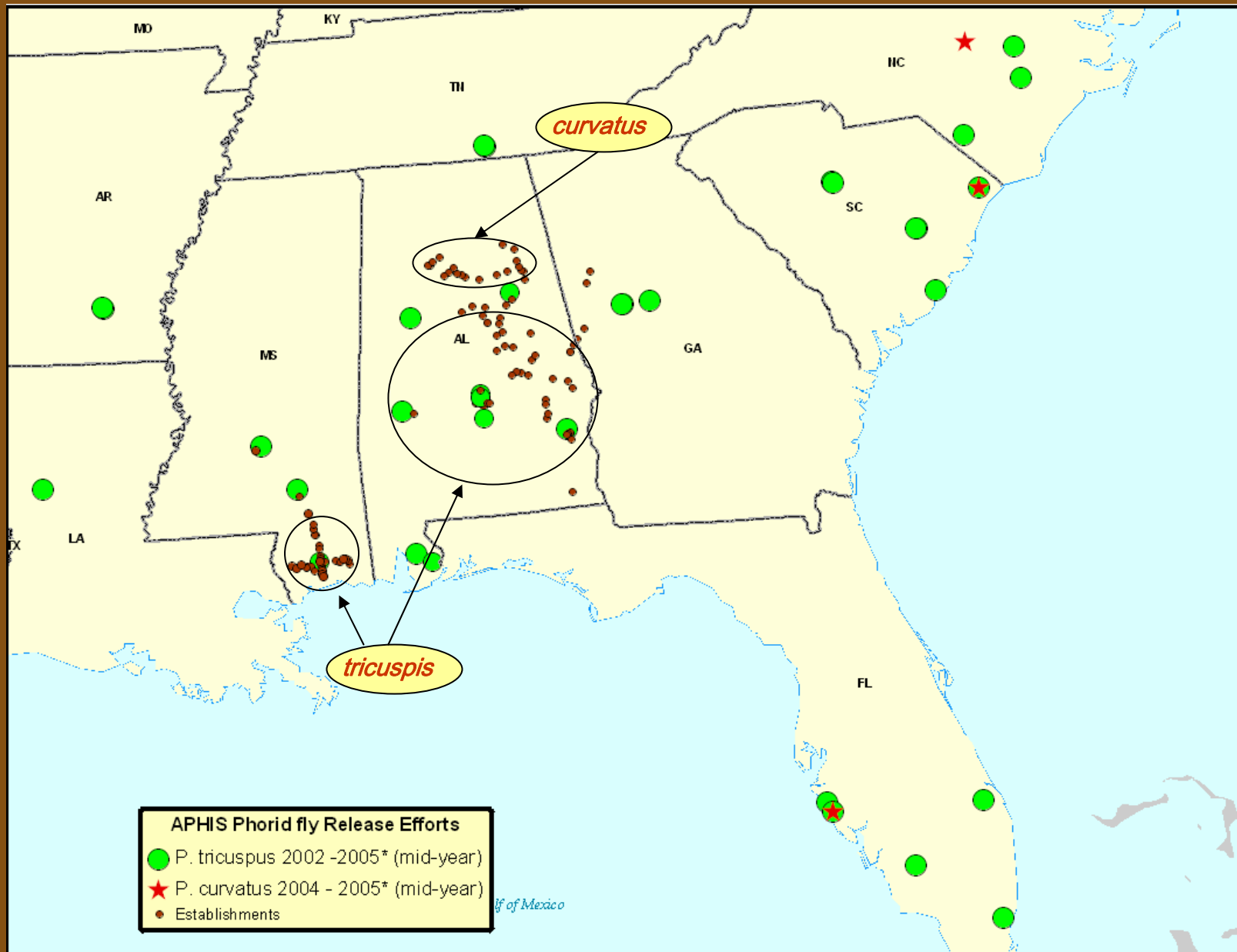
Blank (no records) ← ➢ Blanks (no records, for PDA's)

State (records)

➢ Phorid Fly [(working, all data]

➢ Versions [ArcIMS, wms, wfs]

➢ Servers
• Data servers
• Map servers
• Feature servers
• Data portals

➢ States (add date to file name)

➢ TX

➢ MS

➢ GA

➢ SPHD
• NAPIS
• NAPPFAST

Pass   Checks